



**ATI Millersburg**  
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March 31, 2021

Mr. Chan Pongkhamsing  
EPA Remedial Project Manager  
U.S. EPA Region 10  
1200 Sixth Avenue, ECL 111  
Seattle, WA 98101

RE: Farm Ponds Area Remedial Action Progress Summary Year 2020

Dear Mr. Pongkhamsing:

Please find the enclosed copy of the *Farm Ponds Area Remedial Action Progress Summary Year 2020*. Please let me know if you'd like a hard copy of the report mailed to you.

If you have any questions, please feel free to contact me at 541.812.7376.

Sincerely,

A handwritten signature in blue ink, appearing to read "noel mak".

Noel Mak  
NPL Program Coordinator

Enclosures: 1. *Farm Ponds Area Remedial Action Progress Summary Year 2020*



## TECHNICAL MEMORANDUM

### Farm Ponds Area Remedial Action Progress Summary Year 2020

**To:** Noel Mak, ATI  
**From:** Renee Fowler, GSI Water Solutions, Inc.  
Kathy Roush, GSI Water Solutions, Inc.  
Jenna DiMarzio, GSI Water Solutions, Inc.  
**Date:** March 31, 2021

The purpose of this technical memorandum (TM) is to supplement the Millersburg Operations Remedial Action Progress Summary Year 2020 (GSI, 2021) report by documenting remedial activities performed in 2020 in the Farm Ponds Area. For more information relating to the regulatory framework, regulatory recommendations, and past remedial activities at the Farm Ponds Area or other areas in the Millersburg Operations (Site), please refer to the (GSI, 2021) report.

#### 1. Background

The Farm Ponds Area is a part of the Millersburg Operations, formerly known as the Teledyne Wah Chang facility. The Farm Ponds Area is located at the end of Arnold Road NE in Millersburg, Oregon, approximately 0.75 mile north of the Millersburg Operations Main Plant (Figure 1). The Farm Ponds Area (Figure 2) is approximately 115 acres and consists of the following subareas:

- **Farm Ponds (74 acres)**
  - Historically, from 1979 to 1993, four 2.5-acre bermed ponds with mixed soil-bentonite liners were operated to manage lime solids from the Central Wastewater Treatment System (CWTS) under a National Pollutant Discharge Elimination System (NPDES) permit issued by Oregon Department of Environmental Quality (DEQ) (CH2M Hill, 1993; CH2M Hill, 2003; EPA, 1994; EPA, 2008).
  - The ponds were closed in 1993 and the lime solids were excavated between 1995 and 1999 (CH2M Hill, 2003).
  - In August 2001, the pond dikes were leveled, and the area was graded to its current topography.
  - In 2012, berm material encompassing NPDES wells SS and SD was excavated.
- **Soil Amendment Area (41 acres)**
  - A single experimental application of lime solids as a beneficial soil amendment to agricultural land was performed in 1976 under a permit from DEQ (CH2M Hill, 1993).
  - Subsequently, the area has been used for agricultural purposes.
  - The City of Millersburg owns the land as of 1994.

Institutional controls are implemented that prevent exposure to constituents of concern (COCs) through deed restrictions on zoning and groundwater use.

Groundwater contamination in the Farm Ponds Area is being remediated in accordance with the 1994 U.S. Environmental Protection Agency (EPA) record of decision<sup>1</sup> (EPA, 1994). Chlorinated volatile organic compounds (CVOCs) are the driving COCs in the Farm Ponds.

## 2. Groundwater Remedial Activities

The following groundwater remedial activities have occurred in the Farm Ponds Area (Figure 3):

- In August 2012, nine temporary wells were installed downgradient of NPDES well SS to assess the extent of CVOCs near the well (GSI, 2013).
- As part of the excavation of berm material surrounding NPDES wells SS and SD in 2012, well SS was over-excavated.
- In 2015, monitoring well PW-104S was installed to replace NPDES well SS, and monitoring well PW-108A was installed to replace NPDES well SD. Based on groundwater analytical results from the August 2012 temporary wells, three permanent downgradient monitoring wells (PW-105S, PW-106S, and PW-107S) were installed.

Groundwater is monitored annually in the Farm Ponds Area. Historically, groundwater samples were collected in the summer when the ground was dry so that the monitoring wells could be accessed with a sampling vehicle. However, many of the wells were dry during the summer and consequently collection of groundwater samples was difficult. Beginning in 2016, the annual monitoring event for the Farm Ponds Area has taken place during the spring, similar to the timing for monitoring events in other areas of the Site (e.g., Fabrication Area and Extraction Area). As of 2017, groundwater samples are not collected from wells associated with the NPDES permit due to concerns over well construction. Additionally, although groundwater levels at the NPDES wells are measured during annual monitoring, the groundwater levels are not used for contouring groundwater elevations.

## 3. Geology

Subsurface soils at the Site are divided into four geologic units. From deepest (oldest) to shallowest (youngest), the units are:

- The **Spencer Formation** is Eocene in age and consists of a 2,500-foot-thick sequence of massive marine sandstone, siltstone, and mudstone with interbedded volcanic flows and tuffs (Baker, 1988).<sup>2</sup> The depth to the top of the Spencer Formation is highly irregular due to an erosional period that occurred after deposition. The Spencer Formation has not been encountered in any Farm Ponds borings; at borings in other areas of the Site (i.e., Main Plant and Solids Area), the Spencer Formation occurs at a depth of 5 feet to over 35 feet below ground surface. With a hydraulic conductivity ranging from 0.01 to 0.00001 feet per day at the Site, the Spencer Formation is considered an aquitard (CH2M Hill, 1993).
- The **Blue Clay**, deposited by lakes or rivers, unconformably overlies the Spencer Formation and is found within its topographic lows (i.e., the Blue Clay is absent where the Spencer Formation was a topographic high [CH2M Hill, 1993]). On boring logs, the Blue Clay is described as a blue silt, clayey sandy silt, clayey silt, or silty clay. With a hydraulic conductivity of about 0.00043 feet per day in the Farm Ponds Area, the Blue Clay is considered an aquitard (CH2M Hill, 1993).
- The **Linn Gravel** is an alluvial fan deposited by streams draining the Cascade Mountains (CH2M Hill, 1993; Crenna and Yeats, 1994) between about 28,000 and 36,000 years before present (Roberts, 1984). The Linn Gravel is typically described on boring logs as a silty to sandy gravel with interbeds of silt and sand. In

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<sup>1</sup> EPA. 1994. Record of Decision Declaration, Decision Summary, and Responsiveness Summary for Final Remedial Action of Groundwater and Sediments Operable Unit, Teledyne Wah Chang Albany Superfund Site, Millersburg, Oregon. June 10.

<sup>2</sup> Thickness is near Dallas, Oregon, about 20 miles northwest of Millersburg.

the Farm Ponds Area, the Linn Gravel occurs under confined conditions, and exhibits a thickness ranging from a few feet to about 20 feet. The hydraulic conductivity of the Linn Gravel in the Farm Ponds Area ranges from 0.2 foot per day to 15 feet per day (CH2M Hill, 1989; 1990; 1992). The Linn Gravel is the primary water-bearing unit in the Farm Ponds Area. Monitoring wells with an “A” designation are completed in the Linn Gravel.

- The **Willamette Silt** is composed of fine-grained sediments that settled out of floodwaters that inundated the Willamette Valley more than 19,000 years ago (Glenn, 1965; O'Connor et al., 2001). The Willamette Silt is described as a brown silt with occasional thin sand interbeds; in the Farm Ponds area, a lower unit described as a gray silt, clayey silt, or clay is also present. The Willamette Silt occurs under unconfined conditions. Groundwater velocity in the Willamette Silt is very low, ranging from about 0.1 foot per day in the brown silts with sand interbeds<sup>3</sup> to  $2.4 \times 10^{-5}$  feet per day in the gray silt.<sup>4</sup> Monitoring wells designated with an “S” are completed in the Willamette Silt. Monitoring well PW-104S, the only well exhibiting CVOCs exceeding applicable cleanup levels, is completed within this unit.

## 4. Regulatory Status

### Ready for Reuse

In December 2018, Allegheny Technologies Incorporated (ATI) sent a petition letter to EPA requesting a partial deletion of the Farm Ponds Area from the National Priorities List (NPL) in order to facilitate site redevelopment. During subsequent discussions between ATI and EPA, EPA indicated that concentrations that exceed the maximum contaminant level in monitoring well PW-104S preclude partial deletion. In 2019, EPA conducted a Remedial Process Optimization Study, resulting in the issuance of the Optimization Review Report that includes a number of recommendations (EPA, 2019). One of the recommendations was for the issuance of a Ready for Reuse (RfR) determination for the Farm Ponds Area. This would allow redevelopment to proceed while the parcel remains part of the Superfund Site. EPA also recommended that ATI address the low concentrations of CVOCs in the vicinity of PW-104S (Willamette Silt) by excavation, backfill of clean soil, and confirmation sampling if costs would be offset by the increase in property value (EPA, 2019).

In 2020, ATI explored excluding the Farm Ponds Area from the Site’s broad scope naturally occurring radioactive material (NORM) license, issued by the Oregon Health Authority (OHA). To do this, additional sampling would be required by the OHA. ATI coordinated with EPA, DEQ, and OHA to determine the specific analyses needed to satisfy the NORM license, partial delisting, and/or RfR determination.

## 5. Groundwater Monitoring

The Farm Ponds Area monitoring event occurs annually in the spring. In 2020, the monitoring event occurred on June 18 and 19. Table 1 displays the monitoring schedule at the Farm Ponds Area.

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<sup>3</sup> Based on a hydraulic conductivity of 0.97 feet per day [average of two slug tests from CH2M Hill (1990)], an effective porosity of 0.15 [the midrange of values in CH2M Hill (1993)], and a horizontal hydraulic gradient of 0.015 foot per foot (based on groundwater elevations in the vicinity of PW-105S, PW-106S and PW-107S measure in June 2020).

<sup>4</sup> Based on a hydraulic conductivity of 0.00024 feet per day [triaxial permeability test from CH2M Hill (1993)], an effective porosity of 0.15 [the midrange of values in CH2M Hill (1993)], and a horizontal hydraulic gradient of 0.015 foot per foot (based on groundwater elevations in the vicinity of PW-105S, PW-106S, and PW-107S measured in June 2020).

**Table 1. Farm Ponds Area Monitoring Schedule in 2020**

Well	Water Levels	Field Parameters	CVOCs
<b>Monitoring Wells</b>			
PW-35A, PW-36A, PW-37A, PW-38A, PW-39A, PW-40A, PW-40S, PW-43A, PW-43S, PW-44A, PW-44S, PW-64A, PW-64S, PW-65A, PW-65S, PW-66A, PW-66S, PW-67A, PW-67S	X	-	-
PW-104S, PW-105S, PW-106S, PW-107S, PW-108A	X	X	X
<b>NPDES Wells</b>			
HW, ND, ND-1, ND-2, NS, WD-1, WD-2, WS	X	-	-

**Notes**

CVOCs = chlorinated volatile organic compounds

Field Parameters = temperature, specific conductivity, dissolved oxygen, pH, and oxidation-reduction potential

NPDES = National Pollutant Discharge Elimination System

X = analyzed and/or measured

**Groundwater Flow**

Groundwater level measurements and the calculated groundwater elevations from the 2020 monitoring event are provided in Table 2. As shown in Figure 4, groundwater in the Willamette Silt flows southwest toward the Willamette River, which is a regional discharge point for groundwater in the Willamette Valley.

**Table 2. Groundwater Elevations in 2020**

<b>Well</b>	<b>Date</b>	<b>TOC Elev (ft amsl)</b>	<b>DTW (ft btoc)</b>	<b>GW Elev (ft amsl)</b>
<b>Monitoring Wells</b>				
PW-35A	6/18/2020	234.99	14.44	220.55
PW-36A	6/18/2020	235.99	7.14	228.85
PW-37A	6/18/2020	227.32	7.27	220.05
PW-38A	6/18/2020	223.04	3.22	219.82
PW-39A	6/18/2020	238.70	18.92	219.78
PW-40A	6/18/2020	217.17	10.85	206.32
PW-40S	6/18/2020	217.51	5.26	212.25
PW-43A	6/18/2020	214.12	9.33	204.79
PW-43S	6/18/2020	214.35	4.68	209.67
PW-44A	6/18/2020	214.40	8.82	205.58
PW-44S	6/18/2020	214.44	3.68	210.76
PW-64A	6/18/2020	212.93	6.81	206.12
PW-64S	6/18/2020	212.96	3.51	209.45
PW-65A	6/18/2020	212.52	8.79	203.73
PW-65S	6/18/2020	213.06	3.34	209.72
PW-66A	6/18/2020	211.46	9.15	202.31
PW-66S	6/18/2020	211.36	4.31	207.05
PW-67A	6/18/2020	215.18	11.36	203.82
PW-67S	6/18/2020	212.71	6.08	206.63
PW-104S	6/18/2020	222.76	6.68	216.08
PW-105S	6/18/2020	218.52	3.63	214.89
PW-106S	6/18/2020	219.55	3.69	215.86
PW-107S	6/18/2020	220.65	4.39	216.26
PW-108A	6/18/2020	223.58	3.45	220.13
<b>NPDES Wells</b>				
ND	6/18/2020	232.85	8.45	224.40
ND-1	6/18/2020	216.86	1.94	214.92
ND-2	6/18/2020	217.34	2.25	215.09
NS	6/18/2020	221.15	7.22	213.93
WD-1	6/18/2020	220.45	13.30	207.15
WD-2	6/18/2020	220.60	13.39	207.21
WS	6/18/2020	220.37	9.47	210.90
HW	6/18/2020	238.50	NM, well head was flooded	

**Notes**

DTW = depth to water

ft amsl = feet above mean sea level

ft btoc = feet below top of casing

GW Elev = groundwater elevation

NM = not measured

NPDES = National Pollutant Discharge Elimination System

TOC Elev = top of casing elevation

## Groundwater Quality Data

The field parameter data from the 2020 Farm Ponds Area annual monitoring event are presented in Table 3, and the CVOC results are presented in Table 4. Historical groundwater analytical data from 2000 to 2020 are available in Attachment A.

**Table 3. Field Parameters in 2020 Monitoring Event**

Well	Date	Temperature (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH (units)	Oxidation-Reduction Potential (mV)
PW-104S <sup>1</sup>	6/19/2020	14.16	2,497	2.68	6.26	156.2
PW-105S <sup>1</sup>	6/18/2020	12.82	367	3.00	6.7	112.7
PW-106S <sup>1</sup>	6/18/2020	13.07	290	1.96	6.77	111.5
PW-107S <sup>1</sup>	6/18/2020	12.38	265	3.66	6.19	171.9
PW-108A	6/19/2020	13.91	318	1.77	7.07	-31.9

**Notes**

<sup>1</sup> Well ran dry before field parameters stabilized.

mg/L = milligram per liter

°C = degree Celsius

mV = millivolts

µS/cm = microsiemens per centimeter

pH = potential hydrogen

**Table 4. CVOC Analytical Results for the 2020 Monitoring Event<sup>1</sup>**

Well	1,1,2,2-PCA (µg/L)	1,1,1-TCA (µg/L)	1,1,2-TCA (µg/L)	1,1-DCA (µg/L)	1,2-DCA (µg/L)	PCE (µg/L)	TCE (µg/L)	1,1-DCE (µg/L)	cis-1,2-DCE (µg/L)	VC (µg/L)
<b>Cleanup Level</b>	<b>0.175</b>	<b>200</b>	<b>3</b>	<b>810</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>70</b>	<b>2</b>
PW-104S	0.5 U	0.4 U	7.44	14.2	6.95	4.8	9.2	1.01	44.4	0.4 U
PW-105S	0.5 U	0.4 U	0.5 U	0.21 J	0.21 J	0.4 U	0.4 U	0.4 U	0.25 J	0.4 U
PW-106S	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
PW-107S	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
PW-108A	0.5 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

**Notes**

<sup>1</sup> All analytical samples collected on 6/19/2020.

PCE = tetrachloroethene

µg/L = microgram per liter

TCA = trichloroethane

CVOC = chlorinated volatile organic compound

TCE = trichloroethene

DCA = dichloroethane

U = analyte not detected above method reporting limit

DCE = dichloroethene

VC = vinyl chloride

PCA = tetrachloroethane

**Bold** = concentration meets or exceeds the cleanup level

There were no detections above the cleanup levels in any monitoring well with the exception of PW-104S (Table 4), screened at the base of the Willamette Silt unit. The cleanup level exceedances in PW-104S are fairly consistent with concentrations observed in previous monitoring events (Attachment A). The three monitoring wells (PW-105S, PW-106S, and PW-107S) located downgradient of PW-104S did not have a single CVOC compound detected above laboratory reporting limits, although there were a few detections below the reporting limit and above the detection limit (J-qualified) in PW-105S. PW-40S and PW-65S, which were not sampled for CVOCs in 2020, are downgradient of PW-104S to the west and have not had a CVOC exceedance since 2008 (Attachment A). This indicates that the cleanup level exceedances in PW-104S are highly localized.

## 6. Conclusions

The groundwater quality results from the 2020 monitoring event were similar to previous years' monitoring events. In summary:

- CVOCs were either not detected or detected below the cleanup level in all monitoring wells, with the exception of PW-104S.
- CVOOC concentrations in PW-104S appear to be highly localized and are not migrating in groundwater (i.e., no CVOCs were detected in downgradient wells [PW-105S, PW-106S, and PW-107S]) above the cleanup level.
- The groundwater flow direction of the Willamette Silt (including PW-104S) is generally to the southwest or west.
  - Downgradient wells to the southwest, south, and southeast (PW-105S, PW-106S, and PW-107S, respectively) continue to not have any CVOOC detections above the method reporting limit.
  - Downgradient wells to the west (PW-40S and PW-65S) have not had any CVOOC detections above the cleanup level since 2008, but these wells were not sampled for CVOOCs in 2020.
- PW-108A, installed in the Linn Gravel in 2015, continues to have no CVOOC detections, indicating the CVOOCs near PW-104S are restricted to the Willamette Silt. The data demonstrate that the CVOOC impacts are limited both vertically and horizontally, and are due to limited impacts within the Willamette Silt unit.
- As all downgradient wells have not exceeded the cleanup level, the remedy of monitored natural attenuation at the Farm Ponds Area is protective of human health and the environment.

ATI is continuing to evaluate the future development possibilities of the Farm Ponds parcel. In the meantime, ATI will continue annual groundwater monitoring in the Farm Ponds Area.

## 7. References

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Roberts, M. C. 1984. The Late Cenozoic History of an Alluvial Fill—the Southern Willamette Valley, Oregon. In: Mahaney, W. C., ed., Correlation of Quaternary Chronologies. Norwich, Great Britain: Geo Books, 491–504.

## Figures

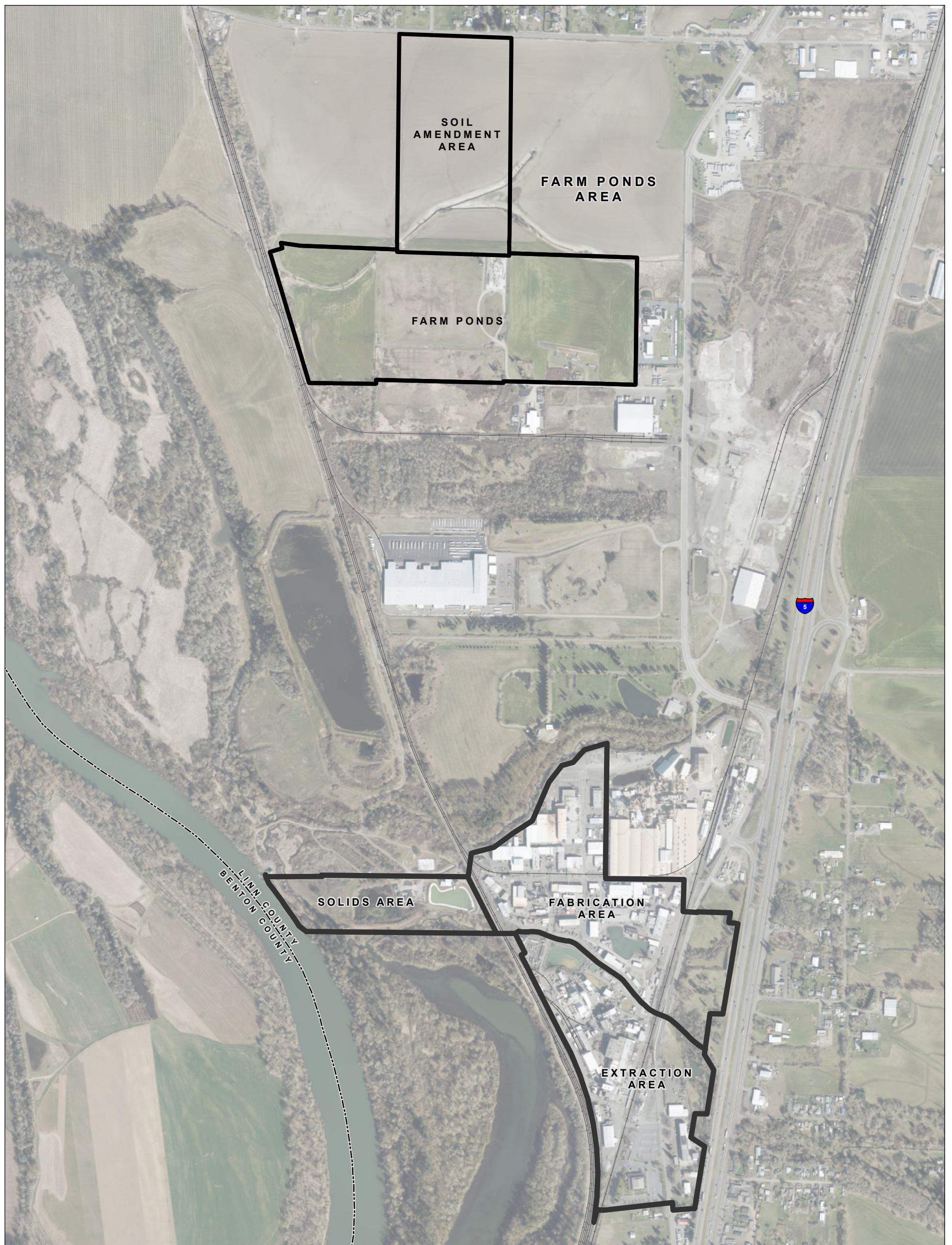
- Figure 1 Millersburg Operations
- Figure 2 Farm Ponds Area Location Map
- Figure 3 Farm Ponds Area Monitoring Wells
- Figure 4 Willamette Silt Groundwater Contours 2020

## Attachment

Attachment A Historical Groundwater Analytical Data

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## Figures

**LEGEND**

- Property Boundary
- Railroad
- [- -] County Boundary

**FIGURE 1**

**Millersburg Operations**  
*ATI Millersburg Operations, Oregon*

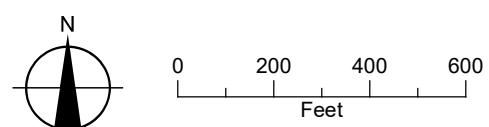
**FIGURE 2**

**Farm Ponds Area Location Map**  
*ATI Millersburg Operations, Oregon*



**LEGEND**

- Site Area** (Yellow outline)
- Farm Ponds Tax Lot** (White fill)
- Railroad** (Black line)

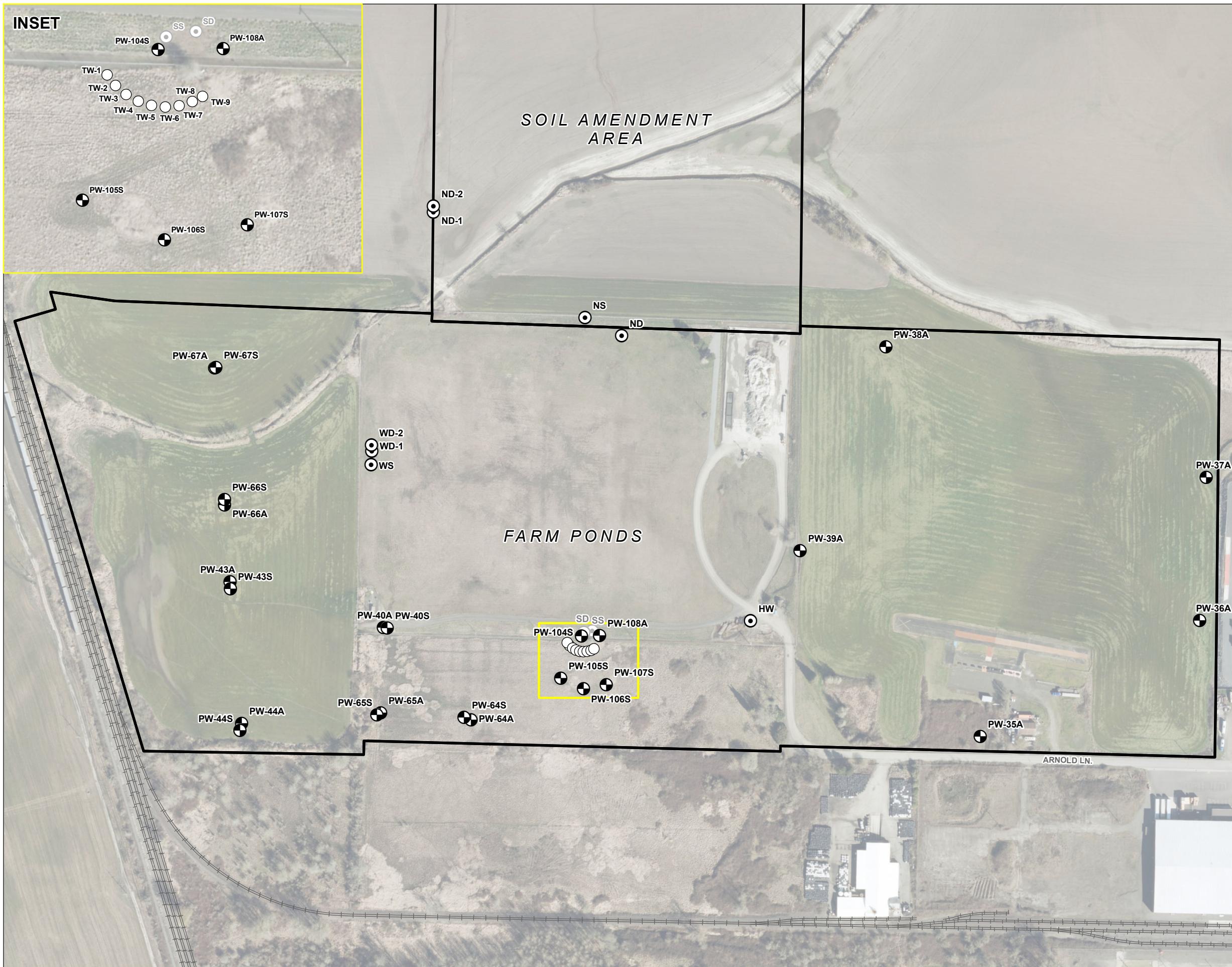


Date: March 12, 2021

Data Sources: Linn Co., OGIC, USGS, DigiGlobe

**FIGURE 3**

**Farm Ponds Area Monitoring Wells**  
**ATI Millersburg Operations, Oregon**

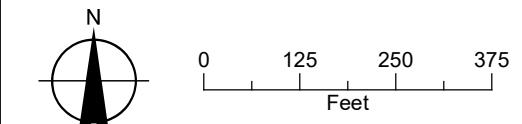
**LEGEND**

- Monitoring Well
- NPDES Well
- Abandoned Well
- Temporary Well
- Property Boundary
- Railroad

**NOTE**

Temporary wells installed in August 2012.

NPDES: National Pollutant Discharge Elimination System



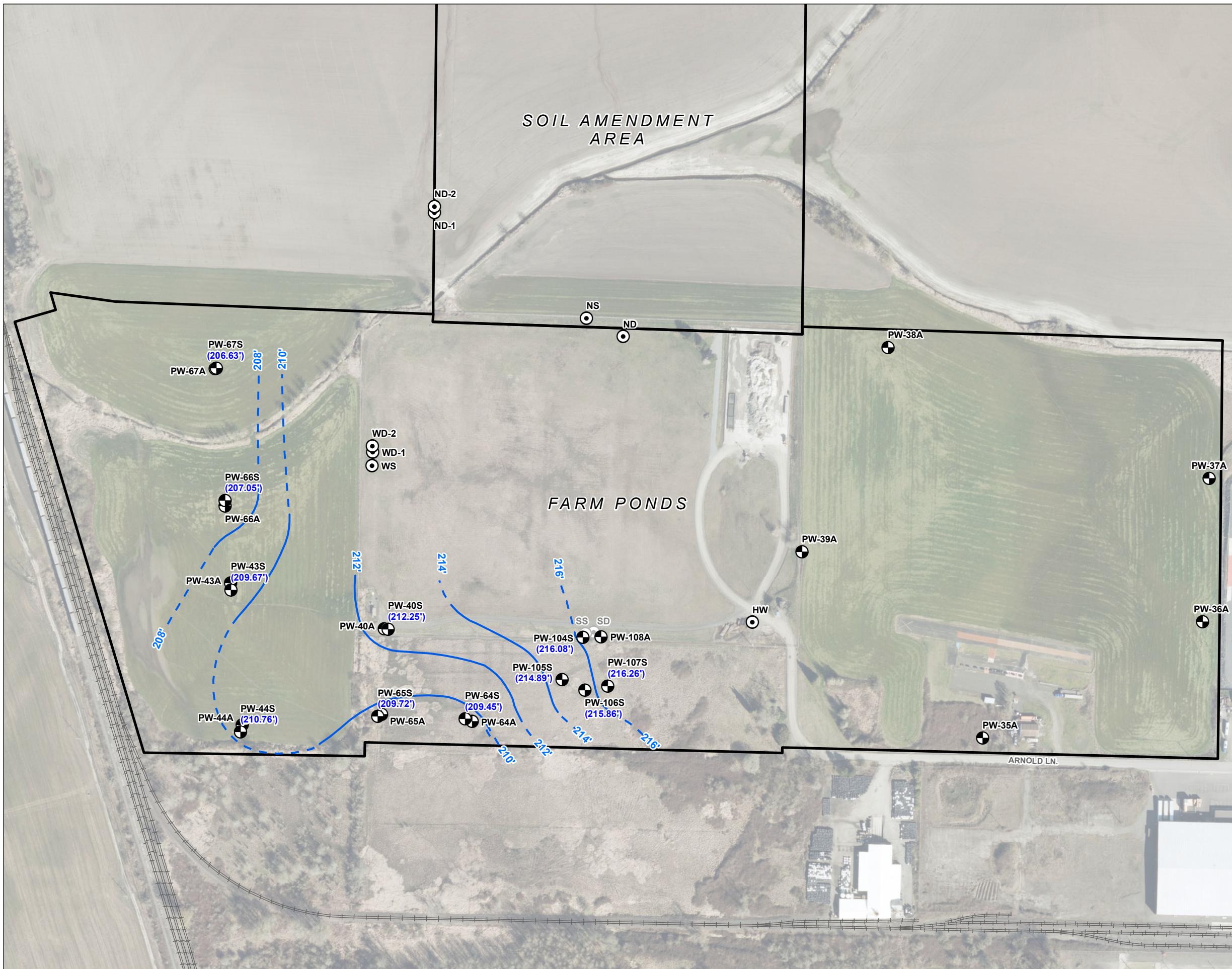
Date: February 11, 2021  
Data Sources: Wah Chang, City of Albany GIS



**FIGURE 4**

**Willamette Silt Groundwater  
Contours 2020**

*ATI Millersburg Operations, Oregon*



## **Attachment A**

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### **Historical Groundwater Analytical Data**

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020
<b>Monitoring Wells</b>																								
PW-35A	1,1,2,2-PCA	µg/L	0.175															0.5 U						
	1,1,1-TCA	µg/L	200															0.5 U						
	1,1,2-TCA	µg/L	3															0.5 U						
	1,1-DCA	µg/L	810															0.5 U						
	1,2-DCA	µg/L	5															0.5 U						
	PCE	µg/L	5															0.5 U						
	TCE	µg/L	5															0.5 U						
	1,1-DCE	µg/L	7															0.5 U						
	Cis-1,2-DCE	µg/L	70															0.5 U						
	Vinyl Chloride	µg/L	2															0.5 U						
PW-36A	1,1,2,2-PCA	µg/L	0.175															0.5 U						
	1,1,1-TCA	µg/L	200															0.5 U						
	1,1,2-TCA	µg/L	3															0.5 U						
	1,1-DCA	µg/L	810															0.5 U						
	1,2-DCA	µg/L	5															0.5 U						
	PCE	µg/L	5															0.5 U						
	TCE	µg/L	5															0.5 U						
	1,1-DCE	µg/L	7															0.5 U						
	Cis-1,2-DCE	µg/L	70															0.5 U						
	Vinyl Chloride	µg/L	2															0.5 U						
PW-37A	1,1,2,2-PCA	µg/L	0.175															0.5 U						
	1,1,1-TCA	µg/L	200															0.5 U						
	1,1,2-TCA	µg/L	3															0.5 U						
	1,1-DCA	µg/L	810															0.5 U						
	1,2-DCA	µg/L	5															0.5 U						
	PCE	µg/L	5															0.5 U						
	TCE	µg/L	5															0.5 U						
	1,1-DCE	µg/L	7															0.5 U						
	Cis-1,2-DCE	µg/L	70															0.5 U						
	Vinyl Chloride	µg/L	2															0.5 U						
PW-38A	1,1,2,2-PCA	µg/L	0.175															0.5 U						
	1,1,1-TCA	µg/L	200															0.5 U						
	1,1,2-TCA	µg/L	3															0.5 U						
	1,1-DCA	µg/L	810															0.5 U						
	1,2-DCA	µg/L	5															0.5 U						
	PCE	µg/L	5															0.5 U						
	TCE	µg/L	5															0.5 U						
	1,1-DCE	µg/L	7															0.5 U						
	Cis-1,2-DCE	µg/L	70															0.5 U						
	Vinyl Chloride	µg/L	2															0.5 U						

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020	
PW-39A	1,1,2,2-PCA	µg/L	0.175															0.5 U							
	1,1,1-TCA	µg/L	200															0.5 U							
	1,1,2-TCA	µg/L	3															0.5 U							
	1,1-DCA	µg/L	810															0.5 U							
	1,2-DCA	µg/L	5															0.5 U							
	PCE	µg/L	5															0.5 U							
	TCE	µg/L	5															0.5 U							
	1,1-DCE	µg/L	7															0.5 U							
	Cis-1,2-DCE	µg/L	70															0.5 U							
	Vinyl Chloride	µg/L	2															0.5 U							
PW-40A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	1,1-DCA	µg/L	810	9.1	6.8	3.95	4.35	3.47	5.3		5.2	5	3.67					2.85							
	1,2-DCA	µg/L	5	1.1	0.9 J	0.54	1 U	0.5 U	0.5 U		0.2 J	0.25 J	0.5 U					0.16 J							
	PCE	µg/L	5	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	1,1-DCE	µg/L	7	0.5 J	1 U	0.5 U	1 U	0.5 U	0.5 U		0.5 U	0.1 U	0.5 U					0.5 U							
	Cis-1,2-DCE	µg/L	70	7.1	3.7	1.82	2.33	1.37	0.93		0.73	0.5 J	0.25 J					0.75							
	Vinyl Chloride	µg/L	2	3.4	2.6	1.09	1.12	0.88	0.58		0.48 J	0.3 J	0.5 U					0.32 J							
PW-40S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.05 J	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3	1.2	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.32 J	0.1 U	0.12 J	0.13 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
	1,1-DCA	µg/L	810	45.8	35	31	29.35	28.09	30.5	29.8	31.8	35	14.3	12.7	9.8	5.3	2.6	3.7	6.45	4.66	5.87		3.21		
	1,2-DCA	µg/L	5	6.6	3.6	4.73	4.28	2.63	1.8	1.8	1.7	0.86 J	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.36 J	0.28 J	0.45		0.4 U			
	PCE	µg/L	5	2.5	1.8	0.54	1 U	0.5 U	0.77	0.13 J	0.5 U	0.1 U	0.57	0.55	0.43 J	0.5 U	0.5 U	0.5 U	0.18 J	0.15 J	0.4 U		0.28		
	TCE	µg/L	5	15.9	8.5	5.63	4.11	1.82	1.5	0.83	1.3	0.7	0.49 J	0.5 U	0.5 U	0.5 U	0.5 U	0.28 J	0.44 J	0.43 J	0.48		0.36		
	1,1-DCE	µg/L	7	2.5 U	1.9	1.93	1.46	0.87	0.67	0.52	0.38 J	0.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U			
	Cis-1,2-DCE	µg/L	70	45	37.6	41.8	40.89	31.9	21.8	23.7	10.5	23	0.74	0.61	0.52	0.5 U	0.5 U	0.5 U	1.7	8.03	6.75	9.06	4.03		
	Vinyl Chloride	µg/L	2	2.4	4.2	4.55	3.19	2.97	1.7	2.7	0.85	2.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.3 J	0.5 U	0.47		0.4 U			
PW-43A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	PCE	µg/L	5	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	TCE	µg/L	5	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U			0.5 U	0.5 U	0.5 U								0.5 U						

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020	
PW-43S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
PW-44A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
PW-44S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U		0.5 U	0.5 U		0.5 U							0.5 U							
PW-64A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U													0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U													0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U													0.5 U						
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U													0.5 U						
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	PCE	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	TCE	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U													0.5 U						
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U													0.5 U						
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U													0.5 U						

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020	
PW-64S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U					0.5 U							0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U					0.5 U							0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U					0.5 U							0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U					0.5 U							0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U					0.5 U							0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U					0.5 U							0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U					0.5 U							0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U					0.5 U							0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U					0.5 U							0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U					0.5 U							0.5 U							
PW-65A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U													0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U													0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U												0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U												0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U												0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U												0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U												0.5 U							
PW-65S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U					0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U					0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U					0.18 J	0.2 J	0.12 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
	1,1-DCA	µg/L	810	1 U	2.95	3.38					3.4	6.2	4.17	3.82	2.68	2.12	1.89	0.5 U	3.27	2.17	2.52			2.28	
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U					1.2	0.51	0.64	0.59	0.51	0.5 U	0.5 U	0.5 U	0.62	0.46 J	0.64			0.62	
	PCE	µg/L	5	1 U	1 U	0.5 U					0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	TCE	µg/L	5	1 U	1 U	0.5 U					0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U					0.5 U	0.1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U					0.5 U	0.2 J	0.11 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U					0.5 U	0.1 J	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.4 U	0.4 U	
PW-66A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U													0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U													0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U													0.5 U						
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U													0.5 U						
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	PCE	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	TCE	µg/L	5	1 U	1 U	0.5 U													0.5 U						
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U													0.5 U						
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U													0.5 U						
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U													0.5 U						

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020	
PW-66S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U												0.5 U							
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U												0.5 U							
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U												0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U												0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U												0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U												0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U												0.5 U							
PW-67A	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U													0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U													0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U												0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U												0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U												0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U												0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U												0.5 U							
PW-67S	1,1,2,2-PCA	µg/L	0.175	1 U	1 U	0.5 U													0.5 U						
	1,1,1-TCA	µg/L	200	1 U	1 U	0.5 U													0.5 U						
	1,1,2-TCA	µg/L	3	1 U	1 U	0.5 U												0.5 U							
	1,1-DCA	µg/L	810	1 U	1 U	0.5 U												0.5 U							
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	PCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	TCE	µg/L	5	1 U	1 U	0.5 U												0.5 U							
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U												0.5 U							
	Cis-1,2-DCE	µg/L	70	1 U	1 U	0.5 U												0.5 U							
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U												0.5 U							
PW-104S	1,1,2,2-PCA	µg/L	0.175															0.37 J	0.28 J	0.5 U	0.3	0.26	0.5 U		
	1,1,1-TCA	µg/L	200															0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U		
	1,1,2-TCA	µg/L	3															12.2	8.76	8.96	9.66	8.27	7.44		
	1,1-DCA	µg/L	810															16.2	11.7	11.9	14.1	12.4	14.2		
	1,2-DCA	µg/L	5															6.09	5.86	6.74	5.56	6.35	6.95		
	PCE	µg/L	5															7.3	4.69	3.01	9.78	4.05	4.8		
	TCE	µg/L	5															19	10.9	7.6	13.3	9.95	9.2		
	1,1-DCE	µg/L	7															1.52	0.64	0.92	1.24	0.82	1.01		
	Cis-1,2-DCE	µg/L	70															41.6	35.5	37.9	42.8	38.4	44.4		
	Vinyl Chloride	µg/L	2															0.55	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U		

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020
PW-105S	1,1,2,2-PCA	µg/L	0.175															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1,1-TCA	µg/L	200															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1-DCA	µg/L	810															0.28 J	0.5 U	0.4 U		0.4 U	0.21 J	
	1,2-DCA	µg/L	5															0.23 J	0.5 U	0.4 U		0.4 U	0.21 J	
	PCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	TCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1-DCE	µg/L	7															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Cis-1,2-DCE	µg/L	70															0.35 J	0.15 J	0.4 U		0.4 U	0.25 J	
	Vinyl Chloride	µg/L	2															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
PW-106S	1,1,2,2-PCA	µg/L	0.175															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1,1-TCA	µg/L	200															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1-DCA	µg/L	810															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,2-DCA	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	PCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	TCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1-DCE	µg/L	7															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Cis-1,2-DCE	µg/L	70															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Vinyl Chloride	µg/L	2															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
PW-107S	1,1,2,2-PCA	µg/L	0.175															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1,1-TCA	µg/L	200															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1-DCA	µg/L	810															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,2-DCA	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	PCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	TCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1-DCE	µg/L	7															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Cis-1,2-DCE	µg/L	70															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Vinyl Chloride	µg/L	2															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
PW-108A	1,1,2,2-PCA	µg/L	0.175															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1,1-TCA	µg/L	200															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1,2-TCA	µg/L	3															0.5 U	0.5 U	0.5 U		0.5 U	0.5 U	
	1,1-DCA	µg/L	810															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,2-DCA	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	PCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	TCE	µg/L	5															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	1,1-DCE	µg/L	7															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Cis-1,2-DCE	µg/L	70															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	
	Vinyl Chloride	µg/L	2															0.5 U	0.5 U	0.4 U		0.4 U	0.4 U	

**Table A1. Historical Groundwater Analytical Data**

ATI Millersburg Operations, Oregon

Well	Analyte	Unit	Cleanup Level	Sept. 2000	Sept. 2001	Sept. 2002	Sept. 2003	Sept. 2004	Sept. 2005	Sept. 2006	June 2007	Sept. 2008	Oct. 2009	Sept. 2010	Sept. 2011	Aug. 2012	Aug. 2013	Jan. 2015 <sup>1</sup>	April 2016	April 2017	May 2018	Jan. 2019 <sup>2</sup>	June 2019	June 2020	
<b>NPDES Wells</b>																									
SD	1,1,2,2-PCA	µg/L	0.175													0.5 U	0.5 U	0.5 U							
	1,1,1-TCA	µg/L	200													0.5 U	0.5 U	0.5 U							
	1,1,2-TCA	µg/L	3													0.5 U	0.5 U	0.5 U							
	1,1-DCA	µg/L	810													0.5 U	0.5 U	0.5 U							
	1,2-DCA	µg/L	5													0.5 U	0.5 U	0.5 U							
	PCE	µg/L	5													0.5 U	0.5 U	0.5 U							
	TCE	µg/L	5													0.5 U	0.5 U	0.5 U							
	1,1-DCE	µg/L	7													0.5 U	0.5 U	0.5 U							
	Cis-1,2-DCE	µg/L	70													0.5 U	0.5 U	0.5 U							
	Vinyl Chloride	µg/L	2													0.5 U	0.5 U	0.5 U							
SS <sup>3</sup>	1,1,2,2-PCA	µg/L	0.175	<b>1.3</b>	<b>0.8 J</b>	<b>0.57</b>	1 U	<b>0.59</b>	<b>0.58</b>	<b>0.84</b>	<b>1.3</b>	<b>1.3</b>	0.1 J	0.5 U	0.5 U	0.5 U									
	1,1,1-TCA	µg/L	200	0.6 J	1 U	0.5 U	1 U	0.5 U	0.5 U	0.7	1.2	1.2	0.16 J	0.5 U	0.5 U	0.5 U									
	1,1,2-TCA	µg/L	3	<b>5.8</b>	<b>3.7</b>	<b>3.4</b>	<b>3.61</b>	<b>3.91</b>	<b>4.6</b>	<b>7.5</b>	<b>13.9</b>	<b>14</b>	0.7	0.61	0.5 U	0.5 U									
	1,1-DCA	µg/L	810	2.3	1.7	1.51	1.83	1.79	2.3	4.7	8.4	8.2	0.33 J	0.29 J	0.5 U	0.5 U									
	1,2-DCA	µg/L	5	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.56	1.1	1.4	0.5 U	0.5 U	0.5 U	0.5 U									
	PCE	µg/L	5	<b>22.5</b>	<b>16</b>	0.87	<b>12.72</b>	<b>14.22</b>	<b>14.7</b>	<b>26.3</b>	<b>49</b>	<b>40.4</b>	2.52	2.13	1.45	0.99									
	TCE	µg/L	5	<b>6.2</b>	3.9	2.91	3.66	3.35	3.8	0.69	<b>11.3</b>	<b>13</b>	0.5 U	0.5 U	0.5 U	0.5 U									
	1,1-DCE	µg/L	7	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U	<b>7.1</b>	1.5	1.4	0.26 J	0.25 J	0.5 U	0.5 U									
	Cis-1,2-DCE	µg/L	70	2.9	1.7	1.22	1.27	0.88	1.1	1.5	3.9	3.5	0.5 U	0.5 U	0.5 U	0.5 U									
	Vinyl Chloride	µg/L	2	1 U	1 U	0.5 U	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.1 U	0.5 U	0.5 U	0.5 U										

**Notes**<sup>1</sup> The fall 2014 monitoring event was conducted in February 2015.<sup>2</sup> An additional sample collected at PW-104S in January 2019.<sup>3</sup> Well SS was decommissioned on September 30, 2012, and ultimately replaced by monitoring well PW-104S.**Bold** indicates that the concentration meets or exceeds the cleanup standard. Refer to Quality Assurance Project Plan for Sitewide Remedial Action Table B-4 for more details (GSI, 2015).

µg/L = microgram per liter

CVOC = chlorinated volatile organic compound

DCA = dichloroethane

DCE = dichloroethene

J = estimated value below method reporting limit

PCA = tetrachloroethane

PCE = tetrachloroethene

TCA = trichloroethane

TCE = trichloroethene

U = analyte not detected above method reporting limit